LAND USE CONTROL REMEDIAL DESIGN Decision Unit 4-1 at Tank Farm 4 (Site 12) Operable Unit 11 Naval Station Newport Portsmouth, Rhode Island

FINAL

Prepared for:



Department of the Navy Naval Facilities Engineering Command, Mid-Atlantic 9742 Maryland Ave. Norfolk, Virginia 23511-3095

Comprehensive Long-Term Environmental Action Navy Contract Number N62470-11-D-8013

CTO WE36

Prepared by:



Resolution Consultants

A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue
Norfolk, Virginia 23510

April 16, 2014

Appendix B

Table of Contents

1.0	INTRODUCTION1
2.0	BACKGROUND AND SITE DESCRIPTION2
3.0	LAND USE CONTROLS5
4.0	LAND USE CONTROL IMPLEMENTATION ACTIONS8
5.0	REFERENCES
	Tables
Table 1	1 Summary of Land Use Control (LUC) Implementation Actions
	Figures
Figure	1 Site Location Map
Figure	2 Site Layout Map
Figure	3 Land Use Control Boundary
J	
	Appendices
	• •
Appen	dix A LUC Instructions
A.1	COMNAVREG MIDLANT Instruction 5090.2
A.2	COMNAVREG MIDLANT Instruction 11011.11A

Land Use Control Compliance Inspection Checklist

Revision No: 3 Revision Date: 4/16/2014

LIST OF ACRONYMS AND ABBREVIATIONS

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

COCs Chemicals of Concern

DGA Data Gaps Assessment

DoD United States Department of Defense

DU 4-1 Decision Unit 4-1

EPA United States Environmental Protection Agency

ER Environmental Restoration

ERA Ecological Risk Assessment

FFA Federal Facilities Agreement

IR Installation Restoration

LUC Land Use Control

MCL Maximum Contaminant Level

MCLG Maximum Contaminant Level Goal

MIDLANT Mid-Atlantic (NAVFAC Mid-Atlantic Division)

MNA Monitored Natural Attenuation

NAVFAC Naval Facilities Engineering Command

NAVSTA Naval Station

Navy Department of the Navy's

NCP National Contingency Plan

NETC Naval Education and Training Center

NPL National Priorities List

O&M Operation and Maintenance

OWS Oil-Water Separator

PAH Polycyclic Aromatic Hydrocarbon

POL Petroleum, Oil, and Lubricants

RD Remedial Design

RIDEM Rhode Island Department of Environmental Management

Revision No: 3

Revision Date: 4/16/2014

ROD Record of Decision

SAP Sampling and Analysis Plan

SARA Superfund Amendments and Reauthorization Act

UST Underground Storage Tank

1.0 INTRODUCTION

This document constitutes the Land Use Control (LUC) Remedial Design (RD) for Decision Unit (DU) 4-1 at Tank Farm 4, Site 12, Operable Unit 11, at the Naval Station (NAVSTA) Newport, Portsmouth, Rhode Island. This LUC RD was prepared by Resolution Consultants on behalf of the Department of the Navy's Naval Facilities Engineering Command Mid-Atlantic (NAVFAC MIDLANT). The Navy is the lead agency conducting the environmental investigations and cleanup of NAVSTA Newport. The LUC RD was developed as part of the remedial design for DU 4-1 at Tank Farm 4 to address LUC implementation actions in accordance with the Record of Decision (ROD) for DU 4-1 at Tank Farm 4 (NAVFAC, 2013) and the NAVSTA Newport Federal Facility Agreement (FFA) (EPA, 2002). This document is considered a primary document in accordance with the FFA and has been prepared in accordance with the Navy *Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions* as agreed between United States Environmental Protection Agency (EPA) and the Department of Defense (DoD) (DoD, 2004).

Revision No: 3

Revision Date: 4/16/2014

2.0 BACKGROUND AND SITE DESCRIPTION

NAVSTA Newport is located approximately 25 miles south of Providence, Rhode Island, on Aquidneck Island within Narragansett Bay. The facility occupies approximately 1,000 acres, with portions of the facility located in the City of Newport and the Towns of Middletown, Portsmouth, and Jamestown, Rhode Island. The western boundary of NAVSTA Newport follows the western shoreline of Aquidneck Island for nearly six miles, facing the Eastern Passage of Narragansett Bay. The major commands currently located at NAVSTA Newport include the Surface Warfare Officers School Command, Naval Undersea Warfare Center, and Naval War College. Research, development, and training are the primary activities at NAVSTA Newport. NAVSTA Newport was formerly known as the Naval Education and Training Center (NETC), established in the 1940s during World War II. NAVSTA Newport is an active military training facility and is expected to remain active for the foreseeable future.

Revision No: 3

Revision Date: 4/16/2014

In 1989, EPA placed NETC/NAVSTA Newport on the National Priorities List (NPL). NAVSTA Newport is an active facility, with environmental investigations and remedial efforts funded under the Navy's Environmental Restoration (ER) Program. The Navy is conducting its Installation Restoration Program, a subset of the ER Program, at NAVSTA Newport in accordance with an FFA between the Navy, EPA, and Rhode Island Department of Environmental Management (RIDEM).

Tank Farm 4 (Site 12) is located within the northern portion of the NAVSTA Newport facility as shown on Figure 1. Tank Farm 4 occupies approximately 90 acres and contains the remnants of 12 former 2.5-million-gallon-capacity underground storage tanks (USTs) originally used to store No. 6 fuel oil and later closed in place. Tank Farm 4 is partially fenced and signs are posted at entrances restricting access to authorized personnel. There are no functional buildings at Tank Farm 4, and no above-ground structures are currently present at DU 4-1. DU 4-1 occupies approximately 14 acres at the southwestern corner of Tank Farm 4 and is bounded to the north and east by other portions of Tank Farm 4, to the south by a mixture of undeveloped and residential property, and to the west by Defense Highway, beyond which lies Narragansett Bay, as shown on Figure 2.

Activities within Tank Farm 4 are currently restricted to general industrial uses and bow hunting by local Navy employees during state-regulated deer hunting season by permit authorized by the Commanding Officer. Portions of Tank Farm 4 are currently being evaluated for use by wind turbines. As such the current and planned future use is considered to be industrial and restricted recreational (bow hunting). Groundwater underlying NAVSTA Newport is not used for drinking

water and DU 4-1 does not lie within the watershed of any area water supply reservoirs (NAVSTA,

Revision No: 3

Revision Date: 4/16/2014

DU 4-1 is defined in the ROD as the portion of Tank Farm 4 where contaminant releases have been detected that are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Petroleum contamination in the remaining portions of TF4 was addressed

through separate investigations, removal actions, and Corrective Action Plans under the RIDEM UST

Regulations.

2013).

DU 4-1 includes two former oil-water separator (OWS) areas and associated discharge pipes and discharge areas combined with Norman's Brook. The easternmost of the two OWSs (Ruin 1) was originally constructed as a burning chamber for tank bottom sludge. Ruin 1 was later converted to an OWS that received discharge from the bottom sediment and water piping that led from each tank area to the east. Excess fluids drained from the burning chamber/OWS to the wetland formed by Norman's Brook to the south. The second OWS (Ruin 2) appears to have been installed for the purpose of accepting water from the ring drain surrounding Tank 41, which is located upgradient, to the east-southeast, of the OWS. The tanks, fuel piping, and lines have been addressed under the Navy's Petroleum, Oil, and Lubricants (POL) Program and under state (RIDEM) authority and are not addressed under CERCLA (NAVFAC, 2013).

Potential site impacts in soil groundwater, surface water, and sediment were identified during past environmental assessments at DU 4-1 and were attributed to previous activities including uncontrolled burning of tank bottom sludge in the burning chamber/OWS structure and associated waste discharged into the environment via piping (NAVFAC, 2013).

Previous investigations have been conducted to evaluate environmental conditions at Tank Farm 4, including DU 4-1. Additionally, extensive soil removal was conducted during a site investigation/removal action between 2004 and 2007. Soil removal occurred in several portions of Tank Farm 4, including the former OWS discharge areas and former Ruin 1 discharge area that are now part of DU 4-1. Most recently, a Data Gaps Assessment (DGA) for DU 4-1 was completed in 2010 and Feasibility Study for DU 4-1 was completed in 2013. The DGA was conducted to provide up-to-date site-representative data for DU 4-1 to aid in determining post-excavation conditions and residual risks to potential human and ecological receptors following the 2004 to 2007 removal actions (NAVFAC, 2013).

As described in the ROD, a CERCLA action is required at DU 4-1 because manganese concentrations in soil pose potentially unacceptable risk to construction workers, polycyclic aromatic hydrocarbons (PAHs) concentrations in soil pose a potential unacceptable risk to potential future residents, and arsenic, cobalt, iron, and manganese concentrations in groundwater pose a potential unacceptable risk to potential future residents. Additionally, some chemicals are present in soil at concentrations exceeding state regulatory criteria (benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, pyrene, and manganese. No unacceptable human health risk was identified from site sediment or surface water. The screening ecological risk assessment (ERA) did not identify unacceptable ecological risks to terrestrial or aquatic receptors exposed to chemical constituents at DU 4-1 and therefore, action is not required to protect ecological receptors (NAVFAC, 2013).

Revision No: 3

Revision Date: 4/16/2014

The Selected Remedy as presented in the ROD for DU 4-1 at Tank Farm 4 (NAVFAC, 2013) includes the following components:

- Design Steps ("Pre-Design Investigation") to plan and refine the target excavation areas.
- Excavation of soil from two target areas with exceedances of Industrial Use Cleanup Goals for certain chemicals of concern (COCs) in surface soil, along with the investigation and potential excavation of solid waste and soil from two additional target areas.
- Off-site soil disposal.
- Groundwater monitoring to confirm that COCs in soil are not leaching into groundwater.
- Monitored natural attenuation (MNA) of metals in groundwater will occur until groundwater cleanup standards are achieved.
- Implementation of LUCs to prevent residential and unrestricted recreational uses of the site and
 inspections to assure that clean surface soils (0-2 feet) are not disturbed, and that LUCs are in
 place and effective.
- Five year reviews.

3.0 LAND USE CONTROLS

LUCs are implemented at sites where contaminants are left in place at levels that do not allow for unlimited use and unrestricted exposure. The LUCs ensure that any remaining contaminants do not pose an unacceptable risk to human health or the environment. LUCs can consist of institutional controls and/or engineering controls. Institutional controls, such as restrictions, notifications, etc., are typically legal documents in the form of deed restrictions, easements, and restrictive covenants. In the case of an active military base, they can consist of base instructions, notations on installation land use plans, or similar instruments. In the form of legal documents, the institutional controls will run with the land. Engineering controls are typically barriers, such as asphalt, buildings, or fencing.

Revision No: 3

Revision Date: 4/16/2014

The ROD (NAVFAC, 2013) identified LUCs, including institutional controls and engineering controls, as components of the selected remedy for DU 4-1 to control or restrict certain types of property uses. The LUCs included in the selected remedy will be maintained until concentrations of hazardous substances have been reduced to levels that allow for unlimited use and unrestricted exposure.

The following LUC performance objectives for DU4-1 are required by the ROD:

- Prevent use of the groundwater at the property for any consumptive purpose, including household use, drinking water supply, or residential irrigation. Non-consumptive industrial use of the groundwater is allowable because groundwater currently meets enforceable drinking water standards including maximum contaminant level (MCLs) and non-zero Maximum Contaminant Level Goals (MCLGs).
- Prevent excavation or intrusive use of the ground, monitoring wells, and any other components of the remedy without proper engineering controls to prevent uncontrolled exposure of soil COCs that are present in the subsurface soil.
- Prevent residential or unrestricted recreational use of the site through the use of existing fencing and signage; assure that at least 2 feet of clean surface soil (0-2 feet) remains undisturbed in areas where remaining subsurface soil exceeds industrial cleanup levels.
- Establish requirements and conduct LUC compliance inspections to verify the continued maintenance of LUCs until the cleanup levels have been achieved.

Revision No: 3

Revision Date: 4/16/2014

Institutional controls and engineering controls will be implemented to ensure that the above LUC performance objectives are met. The ROD (NAVFAC, 2013) identified the perimeter of DU 4-1 as the boundary for the LUCs. This area will be referred to in this LUC RD as the "Site 12 DU 4-1 LUC Area." The Site 12 DU 4-1 LUC Area is presented on Figure 3. The LUCs established for DU 4-1 include the set of restrictions defined below. Following EPA and RIDEM approval of this LUC RD, the restrictions will be implemented on the site property to ensure the LUC performance objectives are met.

The following activities and uses are inconsistent with the LUC performance objectives and are prohibited:

- Excavation or other intrusive use of the ground that disturbs the top 2 feet of soil without prior authorization from NAVFAC MIDLANT Environmental (includes digging, drilling, plowing, planting, cultivating, or construction of buildings or other structures). Groundwater supply (extraction) well installation and use of groundwater at the property for any consumptive purpose, including for household use, drinking water supply, or residential irrigation.
- Any additional uses of the LUC area other than environmental investigation/monitoring, industrial/commercial and restricted recreational use.
- Any use or activity that would improperly interfere with the implementation, effectiveness, integrity, operation, or maintenance of the required remedy components, including, but not limited to: (1) the top 2 feet of surface soil and (2) any system used to monitor groundwater to ensure that the remedy remains effective and protective of human health and the environment.

The following activities and uses are consistent with the LUC performance objectives and will be allowed within the Site 12 DU 4-1 LUC Area:

- Continued industrial use (includes possible futurerenewable energy project), maintenance activities (includes mowing, plowing, brush clearing) and restricted recreational use (includes bow hunting).
- Any remedial operation and maintenance (O&M) activities conducted in accordance with the approved Sampling and Analysis Plan (SAP) or other approved work plan to provide for the sampling, inspection, and installation of groundwater monitoring wells or other O&M actions.
- Any environmental investigations and/or remedial actions conducted in accordance with an approved work plan.

• Installation of any other systems to ensure that the remedial action remains effective and is protective of human health and the environment.

Revision No: 3

Revision Date: 4/16/2014

• In accordance with COMNAVREG MIDLANT INSTRUCTION 11011.11A (Navy, 2011) (Appendix A), site approval is required for actions that affect or may affect facilities or land located on Navy-controlled land holdings. The site approval process includes determining if the proposed action is compatible with Environmental Restoration LUCs, and requires NAVFAC MIDLANT Environmental to identify all environmental compliance requirements. The NAVSTA Newport Installation Restoration (IR) Program Manager will provide notice and coordinate project review with the EPA and the RIDEM. Based on the outcome of this coordination, the IR Program Manager will provide guidance for projects to ensure consistency with the site remedy. The IR Program Manager will provide specific requirements for the project, detail waste management procedures, and establish standards for protecting remedial infrastructure and restoration of the project site.

Implementation actions to ensure that the LUC performance objectives are met are discussed in the following section. Section 4.0 also defines the required notifications and authorizations, and the roles and responsibilities for implementing the actions.

4.0 LAND USE CONTROL IMPLEMENTATION ACTIONS

Pursuant to the ROD, the Navy is responsible for implementing, inspecting, reporting, and enforcing the institutional and engineering controls in accordance with this LUC RD. For purposes of the LUC RD, the term "implementation actions" means the action to implement, operate, maintain, and enforce the LUC component of the remedy. The Navy will perform all short- and long-term implementation actions at DU 4-1 per *The Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions (DoD, 2003)*, the FFA, the ROD, and applicable Navy directives. The Navy may, in the future, delegate or transfer authority to conduct these actions to another entity as part of property transfer agreements (i.e. deed).

Revision No: 3

Revision Date: 4/16/2014

The Navy will submit a copy of Figure 3 to the land record offices of the Town of Portsmouth, Rhode Island, and a listing of LUCs that have been imposed, for the limited purpose of providing public notice of the environmental conditions of, and limitations on, the use of property. Additionally, copies of Figure 2 will be provided to EPA and the RIDEM.

As set forth in this LUC RD, the following implementation actions will be performed to ensure that the LUC objectives are met in accordance with the FFA and ROD:

- 1. Prepare a map defining Site 12 DU 4-1 LUC Area boundaries. Depict on this map the location and boundaries of Site 12 and DU 4-1 and the extent of the area over which the LUCs will apply, as shown on Figure 3. Indicate where LUCs have been imposed and annotate LUCs in the Navy Geographical Information Systems database and real estate summary map(s) for the installation, and follow LUC-related procedures pertaining to ground-disturbing activity and changes in land use per Commander, Navy Region, Mid-Atlantic Instruction 5090.2, Installation Restoration; Land Use Controls at Navy Region, Mid-Atlantic Installations; Establishment and Maintenance, as amended. The Navy will notify EPA and the RIDEM in advance of any changes to these internal procedural instructions that would impact the effectiveness of the LUCs. These instructions are provided in Appendix A.
- 2. Incorporate Figure 3 into the DU 4-1 Long-Term Management Plan (to be developed); additionally, copies of this map will be provided to EPA and the RIDEM.

3. Monitor compliance with the LUCs. LUC monitoring (i.e., inspections) will be coordinated with the Long Term Management program. LUC monitoring will be conducted by the Navy to verify LUCs are being properly implemented and that the LUC objectives are being met. The LUC monitoring results will be provided to the EPA Region 1 and the State of Rhode Island as part of an annual report. The LUC implementation actions to be conducted as part of the monitoring are summarized in Table 1. LUC compliance inspections will be conducted on an annual basis, unless the frequency is reduced by agreement with the Navy, EPA, and the State of Rhode Island. A checklist to be used during LUC inspections is provided in Appendix B.

Revision No: 3

Revision Date: 4/16/2014

- 4. Report to and notify regulatory agencies. The notification requirements are summarized in Table 1 and include the following:
 - a. Notify EPA Region 1 and the State of Rhode Island 45 days in advance of any proposed change in land use that would require modifications to the LUCs to remain consistent with the LUC performance objectives or the selected remedy. The notice shall describe how the LUCs will be changed and mechanisms by which the new LUCs will be implemented to maintain the protectiveness of the remedy.
 - b. Notify EPA Region 1 and the State of Rhode Island by telephone and by e-mail as soon as practicable, but within 10 working days, after discovery of any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs. Notify EPA Region 1 and the State of Rhode Island regarding how the breach will be or has been addressed within 10 days of sending EPA Region 1 and the State of Rhode Island the discovery notification of the breach activity. For more complex breach situations, a telephone call within this 10-day period among Navy, EPA, and the State of Rhode Island to discuss options for addressing the breach will be considered sufficient to meet this notification requirement. Furthermore, any activity that is inconsistent with the LUC objectives or use restrictions, or any other actions that may interfere with the effectiveness of the LUCs will be addressed as soon as practicable, but in no case will the process be initiated later than 10 days after the Navy becomes aware of the breach.

c. Notify EPA Region 1 and the State of Rhode Island in writing at least six months prior to an anticipated transfer or sale of the property subject to LUCs out of Navy custody and control, including any federal-to-federal transfer, so that EPA Region 1 and the State of Rhode Island can be involved in discussion with the Navy on the appropriate provisions to be included in the transfer terms and conveyance documents to maintain effective LUCs. If it is not possible for the Navy to notify EPA Region 1 and the State of Rhode Island at least 6 months prior, the Navy will make this notification as soon as possible, but no later than 60 days before the transfer or sale of any property subject to LUCs. The Navy shall provide a copy of the executed deed or transfer documents to EPA Region 1 and the State of Rhode Island.

Revision No: 3

Revision Date: 4/16/2014

- d. Submit reports of annual monitoring. LUC compliance monitoring shall be conducted annually and the results submitted to the EPA Region 1 and the State of Rhode Island. The annual reports will be used in preparation of the Five-Year Review to evaluate the effectiveness of the remedy. The LUCs portion of the annual report will evaluate the status of the LUCs and how any LUC deficiencies or inconsistent uses have been addressed. The LUCs portion of the annual report will also address whether Navy instructions remain current in regards to LUC enforcement, and whether use of the property has conformed with such restrictions and controls.
- 5. Obtain EPA Region 1 concurrence, in consultation with the State of Rhode Island, prior to modifying or terminating the LUCs or implementation actions. The Navy or other entity shall seek prior concurrence from EPA Region 1, in consultation with the State of Rhode Island, before taking any anticipated action that may disrupt the effectiveness of the LUCs or before taking any action that may alter or negate the need for LUCs.
- 6. Evaluate effectiveness of LUCs as part of each Five-Year Review. Site remedy reviews are required by CERCLA and the NCP as specified in the ROD for DU 4-1 and Tank Farm 4. The last Five-Year Review for NAVSTA Newport was completed in December 2009. The next Five-Year Review will be completed in December 2014. This version will not include an evaluation of DU 4-1, Tank Farm 4 remedy. The evaluation of DU 4-1, Tank Farm 4 remedy will be included in the 2019 Five-Year Review. Five-Year Reviews will be submitted to USEPA Region 1 and the State of Rhode Island for review, per the FFA.

Should the Navy fail to complete the required LUC implementation action, EPA and/or RIDEM shall notify the Navy Remedial Project Manager and seek immediate action. If the Navy fails to complete a required LUC implementation action within a reasonable time of being notified, EPA and/or RIDEM may notify the Deputy Assistant Secretary of the Navy (Environment), who will ensure that necessary action is taken.

Revision No: 3

Revision Date: 4/16/2014

Should a subsequent owner of or a third party at the DU 4-1 site fail to complete a required LUC implementation action, for which such owner or party is responsible, EPA, RIDEM, and the Navy will consult on the appropriate enforcement action. If after the property has been transferred, the Navy fails to complete a required LUC implementation for which it is responsible, EPA and/or RIDEM may notify the Navy Remedial Project Manager, or designated project manager per Section VIII in the NAVSTA Newport FFA. If necessary, EPA and/or RIDEM may notify the Deputy Assistant Secretary of the Navy (Environment), who will ensure that necessary corrective action is taken.

5.0 REFERENCES

Department of Defense (DoD), 2004. Memorandum: Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Record of Decision (ROD) and Post-ROD Policy, Attachment 1 Navy Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions, January 16, 2004.

Revision No: 3

Revision Date: 4/16/2014

Department of the Navy (Navy), 2003. COMNAVREG MIDLANT. Instruction 5090.2. Installation Restoration; Land Use Controls at Navy Region, Mid-Atlantic Installations; Establishment and Maintenance. May 27, 2003.

Department of the Navy (Navy), 2011. COMNAVREG MIDLANT Instruction 11011.11A. Site Approval Requirements and Process. February 14, 2011.

Naval Facilities Engineering Command (NAVFAC), 2013. Record of Decision (ROD), Decision Unit 4-1 at Tank Farm 4 – Site 12, Operable Unit 11, Naval Station Newport, Portsmouth, Rhode Island. September 2013.

United States Environmental Protection Agency (EPA) Region I and the State of Rhode Island and the United States Department of the Navy. 1992. Federal Facility Agreement Under CERCLA 120, In the Matter of the U.S. Department of the Navy, Naval Education and Training Center, Newport, Rhode Island and Naval Undersea Warfare Center, Newport, Rhode Island. March 1992.

United States Environmental Protection Agency (EPA), 2013. Sample Federal Facility Land Use Control ROD Checklist with Suggested Language (LUC Checklist), OSWER Directive 9355.6-12, January 4, 2013.

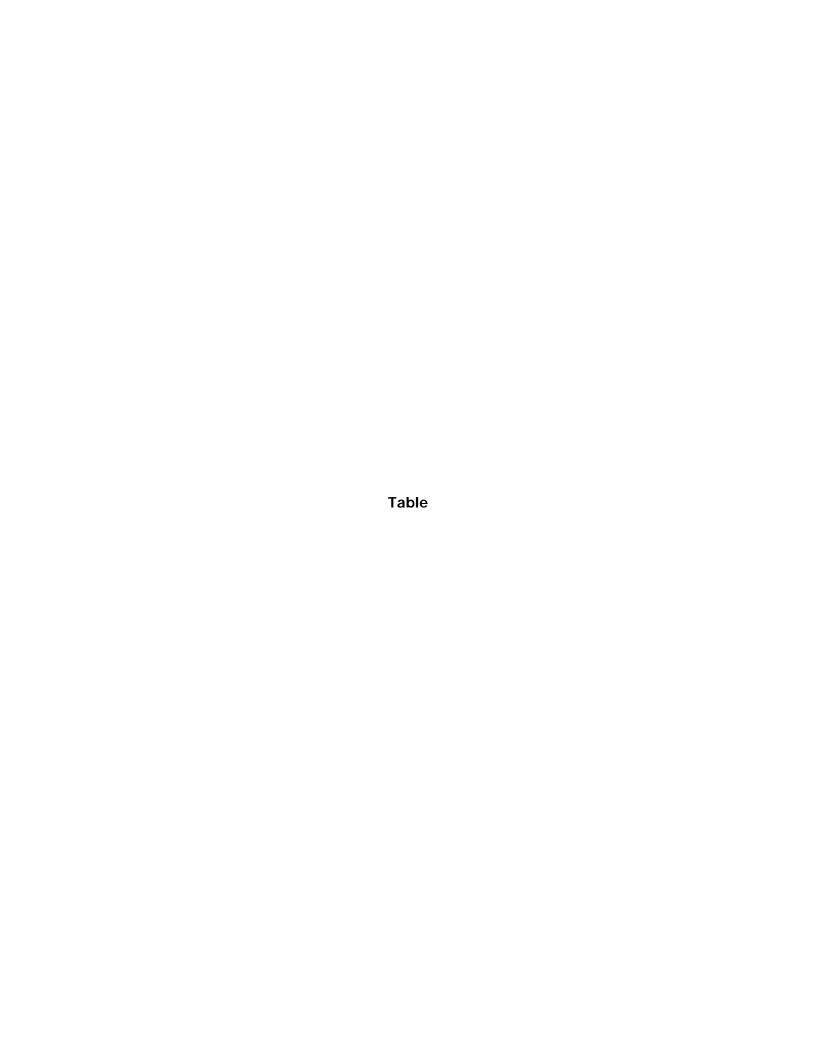
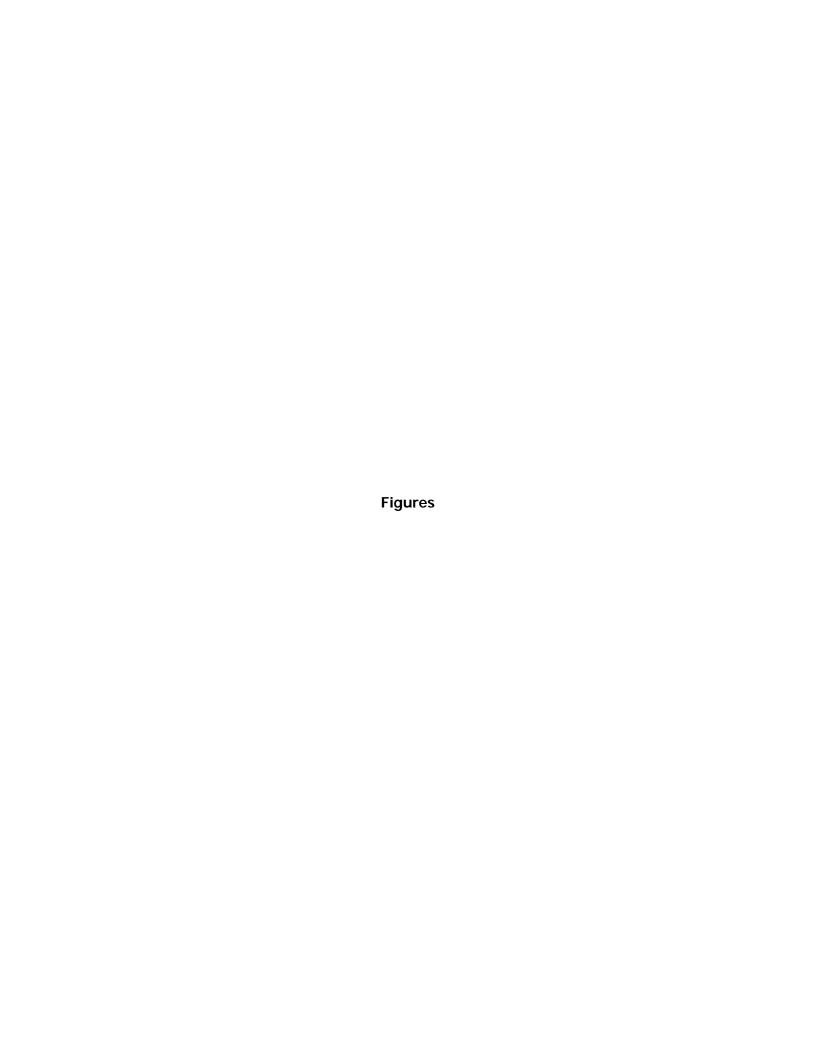


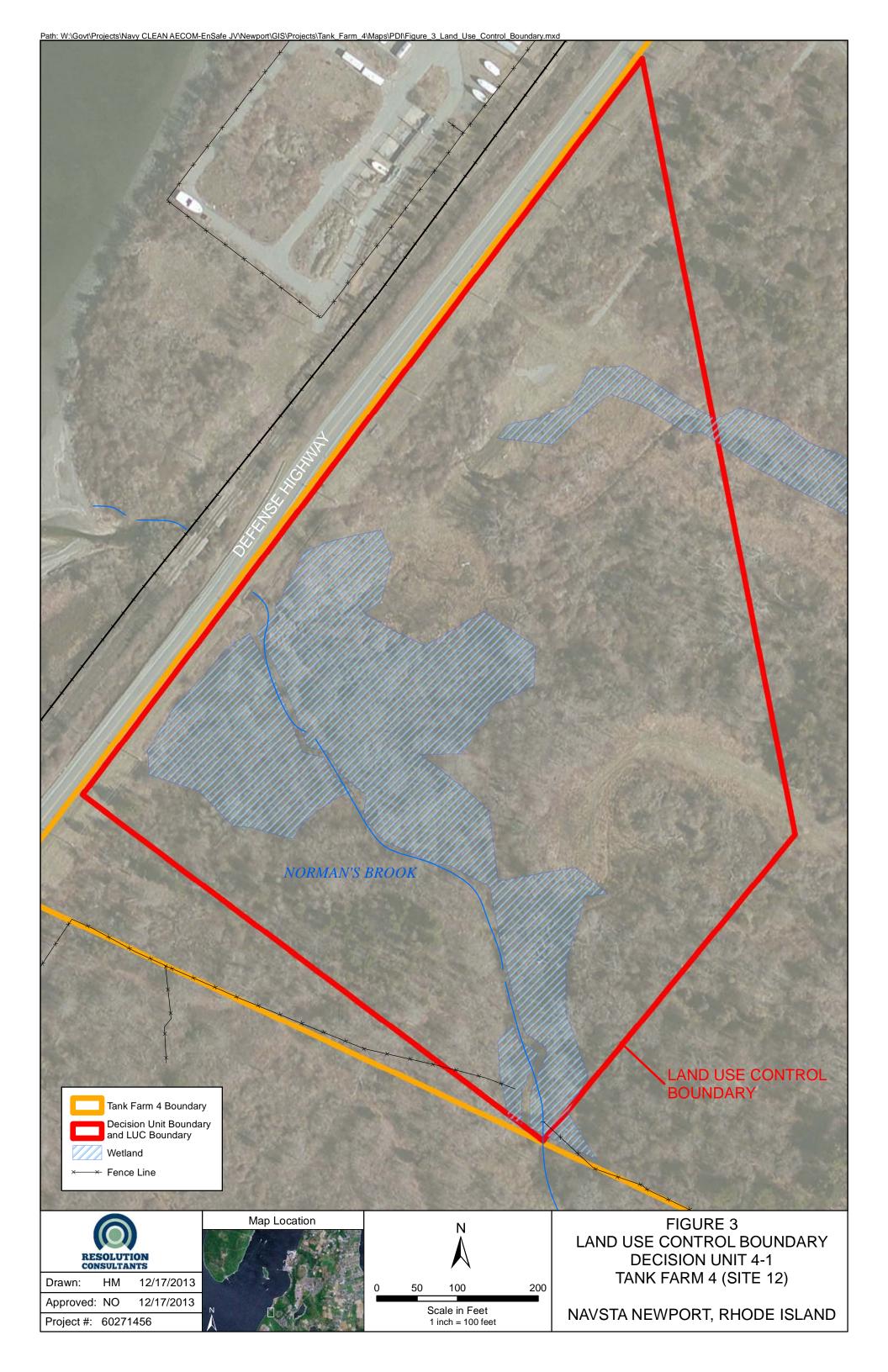
TABLE 1 SUMMARY OF LAND USE CONTROL IMPLEMENTATION ACTIONS DECISION UNIT 4-1 AT TANK FARM 4 (SITE 12) LUC RD NAVSTA NEWPORT PORTSMOUTH, RHODE ISLAND

LUC REQUIREMENT/DESCRIPTION	FREQUENCY		
INSTITUTIONAL CONTROLS			
Issue Final LUC RD.	Once		
Incorporate the LUCs into the land records documentation with the Town of	Once		
Portsmouth, Rhode Island.	- 1.0		
Conduct LUC Compliance Inspections.	Annually		
Issue Annual Inspection Reports to EPA and RIDEM.	Annually		
ENGINEERING CONTROLS AND MONITORING REQUIREMENTS			
Conduct groundwater monitoring.	Per the LTMP		
Conduct inspections of the soil cover (conduct maintenance as needed).	Annually		
Conduct inspections of the partial fencing and signage (conduct maintenance as needed).	Annually		
Issue monitoring and inspection reports	Per event, or per the LTMP		
NOTIFICATION REQUREMENTS			
Navy will notify EPA and RIDEM of activities that are inconsistent with LUC objectives, restrictions, or effectiveness, and how inconsistent activities were/will be addressed.	Per event, as soon as practicable but within 10 days of discovery		
Navy will notify EPA and RIDEM of (1) proposals for changes in land use that would be inconsistent with use restrictions and exposure assumptions described in the ROD; (2) any anticipated action that may disrupt LUCs effectiveness; or (3) any action that may alter or negate the need for LUCs.	Per event, 45 days in advance		
Navy will notify EPA and RIDEM prior to any anticipated transfer or real property subject to LUCs, out of Navy custody and control.	Per event, typical 6-month advance notice, but not less than 60 days		









Appendix A

LUC Instructions

Appendix A.1 Commander, Navy Region, Mid-Atlantic Instruction 5090.2, Installation Restoration; Land Use Controls at Navy Region, Mid-Atlantic Installations; Establishment and Maintenance

Appendix A.2 Commander, Navy Region, Mid-Atlantic Instruction 11011.11A Site Approval **Process**

Appendix B

Land Use Control Compliance Inspection Checklist